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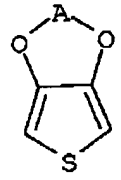
AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A thiophene compound represented by formula (I):



(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom. ~~or a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine containing group.~~

2. Canceled

3. (Currently Amended) Thiophene compound according to claim 1, wherein A represents an ethylene group substituted with at least one fluorine atom. ~~or an ethylene group substituted with at least one fluorine atom and at least one alkyl group substituted with a perfluoro group.~~

4-6. Canceled

7. (Original) Thiophene compound according to claim 1, wherein said thiophene is 3,3-difluoro-3,4-dihydro-2H-thieno[3,4-*b*][1,4]-dioxepine.

8. (Currently Amended) A polymer containing monomeric units of a thiophene compound represented by formula (I):

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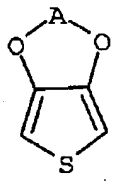


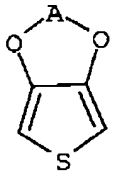
(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom. ~~or a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine-containing group.~~

9. Canceled

10. (Original) Polymer according to claim 8, wherein said thiophene compound is 3,3-difluoro-3,4-dihydro-2H-thieno[3,4-*b*][1,4]-dioxepine.

11. (Currently Amended) A process for preparing a polymer containing monomeric units of a thiophene compound represented by formula (I):



(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom. ~~or a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine-containing group.~~

12. (Original) Process according to claim 11, wherein said process is a chemical or an electrochemical process.

13. (Currently Amended) A solution or dispersion containing a polymer containing monomeric units of a thiophene compound represented by formula (I):

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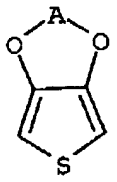


(I)

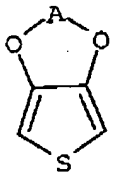
wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom ~~or a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine containing group,~~ in a liquid medium.

14. (Original) Solution or dispersion according to claim 13 further containing a polyanion.

15. (Original) Solution or dispersion according to claim 14, wherein said polyanion is poly(styrenesulphonic acid).

16. (Original) Solution or dispersion according to claim 13, wherein said liquid medium is an aqueous medium.

17. (Currently Amended) A process for using a solution or dispersion containing a polymer containing monomeric units of a thiophene compound represented by formula (I):



(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom ~~or a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine containing group,~~ in a liquid medium for coating an object.

18. (Currently Amended) An ink or paste containing a polymer containing monomeric units of a thiophene compound represented by formula (I):

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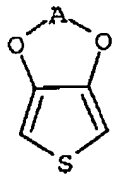
(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom ~~or a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine-containing group~~, said ink or paste being capable of being printed.

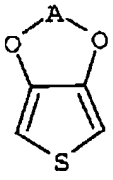
19. (Currently Amended) A first layer containing a polymer containing monomeric units of a thiophene compound represented by formula (I):



(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom ~~or a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine-containing group~~, said first layer exhibiting electroconductive properties.

20. (Currently Amended) A second layer containing a polymer containing monomeric units of a thiophene compound represented by formula (I):



(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom ~~or a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine-containing group~~, said second layer exhibiting antistatic properties.

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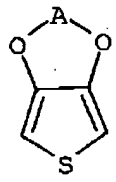
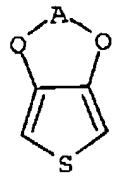
21. (Currently Amended) A device containing a polymer containing monomeric units of a thiophene compound represented by formula (I):



(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom ~~or a C_{1-5} alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine-containing group~~, said device exhibiting electrochromic properties.

22. (new) A thiophene compound represented by formula (I):



(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine-containing-group.

23. (new) Thiophene compound according to claim 22, wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a perfluoro-group.

24. (new) A polymer containing monomeric units of a thiophene compound represented by formula (I):

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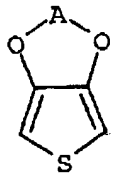
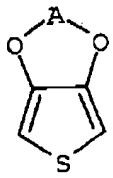


(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine-containing-group.

25. (new) A process for preparing a polymer containing monomeric units of a thiophene compound represented by formula (I):

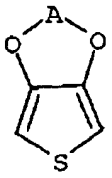


(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine-containing-group.

26. (new) Process according to claim 25, wherein said process is a chemical or an electrochemical process.

27. (new) A solution or dispersion containing a polymer containing monomeric units of a thiophene compound represented by formula (I):



(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine-containing-group, in a liquid medium.

28. (new) Solution or dispersion according to claim 27 further containing a polyanion.

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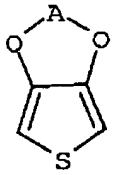
29. (new) Solution or dispersion according to claim 28, wherein said polyanion is poly(styrenesulphonic acid).

30. (new) Solution or dispersion according to claim 27, wherein said liquid medium is an aqueous medium.

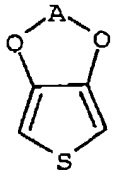
31. (new) A process for using a solution or dispersion containing a polymer containing monomeric units of a thiophene compound represented by formula (I):



(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine-containing-group, in a liquid medium for coating an object.

32. (new) An ink or paste containing a polymer containing monomeric units of a thiophene compound represented by formula (I):



(I)

wherein A represents or a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine-containing-group, said ink or paste being capable of being printed.

33. (new) A first layer containing a polymer containing monomeric units of a thiophene compound represented by formula (I):

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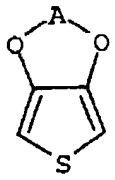
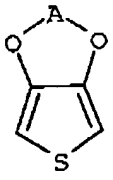


(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine-containing-group, said first layer exhibiting electroconductive properties.

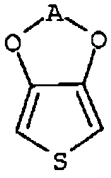
34. (new) A second layer containing a polymer containing monomeric units of a thiophene compound represented by formula (I):



(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine-containing-group, said second layer exhibiting antistatic properties.

35. (new) A device containing a polymer containing monomeric units of a thiophene compound represented by formula (I):



(I)

wherein A represents a C_{1-5}-alkylene bridge substituted with at least one fluorine atom and at least one alkyl group substituted with a fluorine-containing-group, said device exhibiting electrochromic properties.

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